2118897

Hecla
MINING COMPANY

February 12, 1999

Linda Jacobson
EPA Region VIII, 8ENF-T
999 – 18th Street, Suite 500
Denver CO 80202-2466

RE: Hecla Pond, Paiute Reservation
St. George UT

Dear Ms. Jacobson,

Included within this letter and attachments is information available to Hecla in response to your January 11, 1999, letter to Hecla. Each attachment is identified with both an attachment letter designation and the associated EPA request number.

Hecla has in good faith searched for documents in its possession or control that are responsive to each of the EPA information requests. However, many of the operational records may not have been transferred to Hecla's corporate office at the time of the sale of the property to OMG.

Information Request #1

A copy of the Purchase and Sales Agreement between Hecla and OMG is in attachment A. This agreement contains any requirements negotiated between Hecla and OMG for the various items listed in this request number. Exhibit E of the agreement contains information on pond rehabilitation, waste removal and relocation, and cleanup standards. Attachment B contains the technical report presenting the data results, observations, and testing program for rehabilitation of the Pond 3A geomembrane liner after the materials were removed and relocated.

The site cleanup confirmatory sampling results and drawings of the sampling locations are in Attachment C.

Hecla consolidated the wastes that had been placed in various impoundments by both St. George Mining Company (SGMC) and Hecla into one impoundment, designated as pond 2. The acidic pond liquids remaining from SGMC mining activities were neutralized with limestone and lime prior to relocation of the waste. There was also some unmilled ore at the facility when the operation was shutdown in 1990 that was placed into pond 2. Pond 2 is located on land leased by Hecla from the Shivwits Paiute Band and managed by Hecla.

6500 Mineral Drive • Coeur d'Alene, Idaho 83815-8788 • 208/769-4100 • FAX 208/769-4107 • www.hecla-mining.com

Information Request #2

We have assumed that this request is meant to include only off-site shipments of solid and hazardous wastes; such records found within the Hecla files are included in Attachment D.

Information Request #3

The mining operation was originally developed and operated by SGMC for the primary extraction and beneficiation of gallium and germanium, and the secondary extraction and beneficiation of copper, zinc, and silver. The construction of the mill was completed in the fourth quarter of 1985. Numerous operating difficulties resulted in the shutdown of the operation by SGMC in June 1987.

The milling consisted of grinding, washing, sorting, filtration, leaching, precipitation, and solvent extraction. A flow sheet and material balance for the SGMC operation is in Attachment E. This flow sheet identifies the chemicals added to the process. All of the activities identified on this flow sheet are beneficiation as defined by the EPA. Hecla is unaware of any "mineral processing" activities conducted by SGMC at the facility. A description of the SGMC extraction operation is also in Attachment E. Note that the section heading states "to be revised". Hecla does not know the exact source of this information or what might have been revised.

Waste rates are identified on the SGMC flow sheet. Hecla has not found any other information concerning volumes and/or flow rates of the products, process streams, and waste streams of the SGMC operation. SGMC constructed 8 waste impoundments, placing waste and potential products in 7 of the impoundments. The seven SGMC ponds that were used were lined with an asphalt-sprayed fabric material. The designations and the estimated amount of material in each pond at the time of Hecla purchase is listed below:

Pond	Contents	Estimated Amount
Pond 1A	not used	
Pond1B	zinc sulfate	125 yd^3
Pond 1C	germanium operation waste	340 yd^3
Pond 2	leach tailings	56,800 yd^3
Pond 2A	leach tailings	23,272 yd^3
Pond3A	iron sulfate	1,200 yd^3
Pond 3B north	iron sulfate	2,800 yd^3
Pond 3B south	iron sulfate	2,800 yd^3

There was also a small operational pond, constructed of hypalon, designated as a surge pond, which contained an estimated 180 yd^3 at the time Hecla purchased the Apex facility. Because the Apex was a metal mine and mill, measurable levels of metals would be expected in the ore and milling wastes. Hecla sampled the SGMC wastes in the

impoundments in 1988. The analytical results from this pond sampling are in Attachment F.

Information Request #4

Hecla acquired the mining operation in March 1989 and produced germanium concentrate and cathode copper from February 1990 until August 1990, when production was stopped due to the inability to produce products at market prices. The mill flow sheet and description are in Attachment G.

In September 1989, the final rule on the RCRA mining waste exclusion (the Bevill exclusion) was published in the Federal Register. Due to some uncertainty concerning the regulatory status of the operation under these new rules, Hecla submitted a RCRA Part A permit application to the EPA to treat, store, and dispose of hazardous wastes as an existing facility. Hecla also provided the EPA's Region VIII with a summary of the facility operation for a written confirmation of Hecla's conclusion that the activities at the facility constituted beneficiation operations and, therefore, wastes from the operation would be excluded from RCRA regulation. This summary included materials used and products produced. EPA provided Hecla with this confirmation in a July 19, 1990, letter. Based on this EPA concurrence of the Bevill excluded status of the facility, Hecla withdrew its Part A application. Copies of the three letters to the EPA and the EPA response are included in Attachment H.

Although the waste produced by the facility was excluded from RCRA, Hecla neutralized the combined tailings and solvent extraction raffinate by the addition of limestone and lime. EP toxicity testing of the neutralized waste demonstrated results below the regulatory limits for the 8 RCRA metals. A summary of the testing is included in Attachment I.

Hecla rebuilt ponds 1 A/B and 3A following acquisition of the site. Each impoundment had two 60-mil high density polyethylene (HDPE) liners with leak detection systems, and a geonet flow enhancer between the primary and secondary liners. The ponds were built using accepted engineering practices using ASTM and NSF standards. Ponds 1 A/B and 3A were the only ponds used for new waste disposal by Hecla.

When the facility was operating, the leaching operation generated an estimated 47 tons/day of tailings and 15 tons/day of liquids. This equivalent to approximately 37 yd^3 /day. The solvent extraction circuit produced an estimated 209 tons/day of solids and 209 tons/day of liquids.

Information Request #5

The only feedstock for the Hecla gallium/germanium operation was ore from the Apex mine. The mine was located approximately 7 miles south of the mill. Assay information for the ore is in Attachment J.

Cobalt sulfate operations were conducted at the facility from November 1992 until the sale of the operation to OMG in 1995. Much of the effort during this period was in trying to procure acceptable feedstocks. Potential feedstocks were screened to ensure that they were not regulated as hazardous wastes prior to acceptance by Apex. If a feedstock sample was rejected the samples were sent back to the orginator. Hecla has very few cobalt recovery operational records in our files and found no records containing the requested information on additional analytical data or metal assays from these operations.

Information Request #6

A small amount of material was obtained from Zinc Corporation of America (ZCA) for some small scale pilot testing in the mill. The ZCA flow sheet is in Attachment K. The activities at Apex using the ZCA feedstock were still within the EPA regulatory definition of beneficiation. Hecla did not reach contractual agreement with ZCA and additional material was not brought to the facility. Waste materials consisting of 2.21 tons of sludge and 634 pounds of filter cloth were shipped off-site for disposal. The disposal records for these non-RCRA regulated wastes are in Attachment E.

The flow sheet and description for the cobalt sulfate operation are in Attachment L. This operation produced two primary waste streams, iron cake and tailings. Iron cake was placed into super sacks after generation. Each super sack was sampled and analyzed for TCLP metals. Iron cake that tested nonhazardous was placed into pond 1 A/B or 3A. Available test results passing the TCLP are in Attachment M. Also, the tailings effluent was sampled on a regular basis for RCRA metals. The sampling results found for the tailings effluent (noted as tailings, pond 3A effluent, and neutralization on the various analytical sheets) are in Attachment N, as well as other passing TCLP results. Test results failing the TCLP are included with the waste manifests in Attachment E.

Information Request #7

Hecla has not found any additional information on feedstock records other than those already addressed under previous items.

Information Request #8

Information on pond contents and volumes was presented in previous responses. The amount of material in pond 1A/B was estimated at 30,000 yd^3 in 1996 and was primarily wet solids transferred to pond 2. The amount of material in pond 3A in 1996 was estimated at 51,500 yd^3 and was mostly liquids that were evaporated prior to transfer of the solids to pond 2. An estimated 10,000 yd^3 of solids were transferred from pond 3A to pond 2.

Information Request # 9

The pond 2 area currently managed by Hecla is completely fenced. Hecla has placed some of the cover material on pond 2; however, the materials in the impoundment have

not yet completely consolidated. The remaining cover will be placed on the impoundment after the waste consolidation is complete and the controlled seepage stops. The final cover will be revegetated with an appropriate seed mix. An as-built drawing of the pond is shown on Attachment O.

Information Request #10

SGMC completed construction of the facility in 1985. Hecla purchased the facility in March 1989. The map is in Attachment P.

Information Request #11

The site map is in Attachment Q. The other information requests have been addressed in previous request responses.

Information Request #12

During Hecla's operation of the facility no permits were required. Hecla submitted a Part A RCRA permit application in 1990 but later withdrew this application (see response to request number 4). Hecla obtained an EPA hazardous waste identification number and made several EPCRA notifications during the germanium operation. However, we have not found copies of these documents.

Information Request #13

The lease agreements with the Shivwit Paiute Band are in Attachment R.

Information Request #14

We believe that the only pond construction specifics of relevance at this point are for pond 3A and pond 2. These, along with pond 1 A/B, were the only lined ponds remaining at the time of property transfer. The construction evaluation of ponds 3A and 1 A/B is in Attachment S. The contents of pond 1 A/B were removed including the liner system. Hecla found no specific information on the construction of the pond 2 liner. The site was extensively sampled for contamination (see Attachment C). Hecla reported a continuous release of ammonia above an RQ amount from ponds 1 A/B and 3A to the EPA in 1990. There is also the controlled seepage now occurring from pond 2 that is collected as described in our response to request number 18. The ponds are constructed so that there is run-on into the ponds but there is no run-off that can occur from contact with the pond contents. During Hecla's operation of the facility, HDPE pipelines were used to carry wastes to the ponds. These lines were contained within HDPE lined ditches. Precipitation onto the lined ditches was conveyed by these lined ditches into either pond 1 A/B or pond 3A.

Information Request # 15

Other than areas identified on the facility drawing, Hecla has not found any other specific information on storage of feedstocks or wastes.

Information Request # 16

Groundwater monitoring data from 1983, 1984, and 1988 is included in Attachment T. Hecla has not retained any other groundwater monitoring information. Hecla has no analytical data on run-on and run-off from pond 2.

Information Request #17

See previous responses.

Information Request #18

The evaporation pond and collection ditch was pumped out in early December 1998. The water was placed in a shallow sump on top of pond 2 to allow for increased evaporation. At the same time, a second decant pond was constructed to accommodate any excess water in the original evaporation structure and collection ditch. The second sump is connected to the original evaporation pond to allow a substantial free board of at least 10 inches. This change also lowers the flow depths in the collection ditch. The latest examination indicated the original sump was still maintaining approximately 18 inches of freeboard. The collection/evaporation ponds will be removed when seepage stops and the final cover is in place.

We hope that this information provides some help in finalizing your inspection. Please call me at 208-769-4197 if you have questions concerning this information.

Sincerely,

David O. Suhr

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Idle Properties Manager

GRG:csm

Contd

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The lease agreements with the Shivwit Paiute Band are in Attachment R.

Information Request #14

We believe that the only pond construction specifics of relevance at this point are for pond 3A and pond 2. These, along with pond 1 A/B, were the only lined ponds remaining at the time of property transfer. The construction evaluation of ponds 3A and 1 A/B is in Attachment S. The contents of pond 1 A/B were removed including the liner system. Hecla found no specific information on the construction of the pond 2 liner. The site was extensively sampled for contamination (see Attachment C). Hecla reported a continuous release of ammonia above an RQ amount from ponds 1 A/B and 3A to the EPA in 1990. There is also the controlled seepage now occurring from pond 2 that is collected as described in our response to request number 18. The ponds are constructed so that there is run-on into the ponds but there is no run-off that can occur from contact with the pond contents. During Hecla's operation of the facility, HDPE pipelines were used to carry wastes to the ponds. These lines were contained within HDPE lined ditches. Precipitation onto the lined ditches was conveyed by these lined ditches into either pond 1 A/B or pond 3A.

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GRG:csm